



## Light collector

**Description of Technology:** The present invention relates to a light collector adaptable for use with a generally planar photodetector to provide a uniform photodetector output response over a predetermined polar angle range regardless of the polar angle of incidence of light upon the collector.

### Patent Listing:

1. **US Patent No. 5,471,053**, Issued November 28, 1995, "Light collector"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5471053>

**Market Potential:** Personal sun exposure measurement devices, or so-called UV personal dosimeters, utilize a planar photodetector which generates an output response signal in accordance with the magnitude of the radiation incident thereon. Since the output response signal of the photodetector varies as a function of the angle of incidence of the illuminating light, these devices will not provide the desired measurement accuracy unless they are properly oriented with respect to the source of the incident radiation. Thus it is necessary to provide a suitable aiming mechanism which maintains the photodetector in the most optimal relationship with respect to the sun to insure that the maximum intensity of the UV-radiation is detected. The aiming mechanism may take a variety of forms.

However, when such devices are properly positioned to receive direct solar radiation they will typically not be positioned to detect radiation that is reflected or scattered from snow, water or soil surfaces, as might be experienced by a person when skiing, swimming, boating or reclining on a sandy beach.

It is, therefore, believed advantageous to provide a light collector for use with a photodetector that provides a uniform output response from the photodetector over a range of polar incidence angles exceeding 180 degrees. More preferably, it is believed advantageous to provide a light collector that provides a uniform output response from the photodetector over a polar angular range of at least two hundred seventy degrees.

### Benefits:

- Monitors UV from multiple sources

### Applications:

- UV detection

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